WO 2004/085699 PCT/EP2004/050210

-12-

CLAIMS

Claim 1:

A method to improve the sputter deposition process, said method comprising the following steps:

a) providing a vacuum;

- b) providing an electrode in said vacuum;
- c) providing a substrate in said vacuum, said substrate having no contact with said electrode
- d) providing a device in said vacuum; said device being in relative motion to said electrode and being in mechanical contact with said electrode over a contact zone;

said device removing material from said electrode or said device applying material to said electrode, said material being in a solid state.

15

Claim 2:

The method according claim 1 wherein said device has a hardness, which is greater than, or equal to the hardness of the electrode or part thereof in order to remove material from said electrode.

20

Claim 3:

The method according claim 1 wherein said device has a hardness, which is smaller than, or equal to the hardness of the electrode or part thereof in order to apply material from said electrode.

25

Claim 4:

The method according to any one of claim 1 to 3 wherein said electrode is a cathode.

30 Claim 5

The method according claim 4 wherein said cathode is a rotatable cylindrical target.

Claim 6:

The method according to any one of claim 1 to 3 wherein said electrode is an anode.

Claim 7:

The method according claim 6 wherein said anode is a vacuum chamber wall or shield.

Claim 8:

The method according claim 6 wherein said anode is a rotatable cylindrical tube.

Claim 9:

The method according claim 6 wherein said anode is a rotatable brush.

15

5

Claim 10:

The method according to any one of claims 1 to 5 wherein said target has an end zone that is not sputtered and wherein said contact zone overlaps with said end zone.

20

Claim 11:

The method according to any one of claims 1, 2, 3, 4, 5 or 10 wherein said target has a zone of race track return and wherein said contact zone overlaps with said zone of race track return.

25

Claim 12:

The method according to any one of claims 1, 2, 3, 4, 5, 10 or 11 wherein said target has an erosion zone and wherein said contact zone overlaps with said erosion zone.

30

Claim 13:

The method according claim 12 wherein said target is an ITO target.

Claim 14:

WO 2004/085699 PCT/EP2004/050210

-14-

A method according to any one of claims 1 to 13 wherein said device is intermittently in relative motion to said electrode and said device is intermittently in contact with said electrode.

5 Claim 15:

A method according to any one of claims 1 to 13 wherein said device is continuously in relative motion to said electrode and said device is intermittently in contact with said electrode.

10 Claim 16:

A method according to any one of claims 1 to 13 wherein said device is intermittently in relative motion to said electrode and said device is continuously in contact with said electrode.

15 Claim 17:

A method according to any one of claims 1 to 13 wherein said device is continuously in relative motion to said electrode and said device is continuously in contact with said electrode.